



California Energy Commission

IEPR Committee Workshop

CALIFORNIA ENERGY DEMAND 2012-2022

REVISED STAFF FORECAST:

Self-Generation Forecast

Sacramento, CA

February 23, 2012

Asish Gautam

Demand Analysis Office

Electricity Supply Analysis Division

Agautam@energy.state.ca.us / 916-654-3900



Data Sources

- DG programs (ERP, NSHP, CSI, SGIP, and similar programs offered by POUs)
- Large industrial and commercial users reporting under QFER
- Energy and Peak factors come from annual CSI and SGIP program evaluation reports



Revisions and Updates

- Corrected for data entry errors in QFER reporting
- Updated program data for CSI, NSHP, Solar Hot Water, and POU PV
- Updated capacity and peak factors to reflect 2010 CSI/SGIP program evaluation report



Forecast: Residential

- Residential PV and solar water heating adoption forecast with new predictive model
 - PV system cost and performance data come from a study sponsored by EIA
 - Solar water heating system cost and performance data based on an assessment undertaken by CPUC



Forecast: Residential

- Residential Predictive Model
 - Payback calculations based on system and maintenance costs, incentives, and fuel rates
 - Estimated payback applied to a Bass Diffusion adoption curve
 - Results for adoption differ by demand scenario since projected fuel rates and number of homes vary by scenario



Forecast: Non-Residential

- No predictive model
- Forecast based on trend analysis
 - Examine rate of growth in adoption based on historic DG incentive program data
 - Estimate growth and then estimate energy and peak impacts based on capacity/peak factors from CSI/SGIP evaluation reports



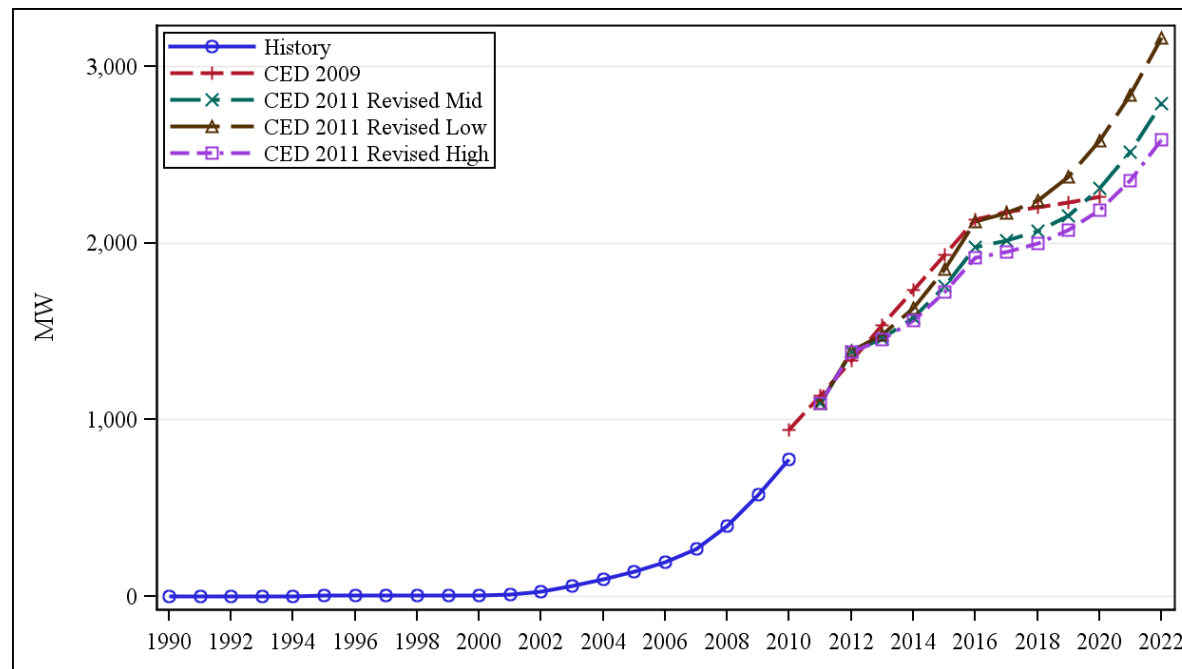
Focus on Installed PV Capacity

- Non-PV and PV energy and peak impacts to be discussed in main presentation of each planning area



California Energy Commission

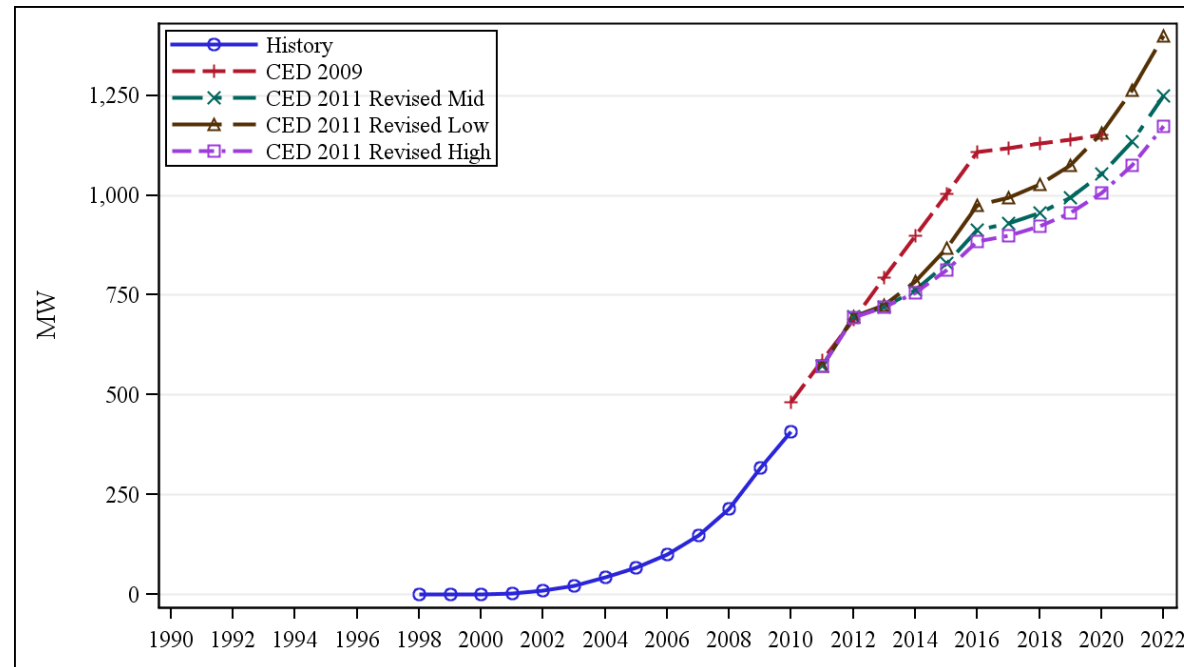
Statewide Installed PV Capacity





California Energy Commission

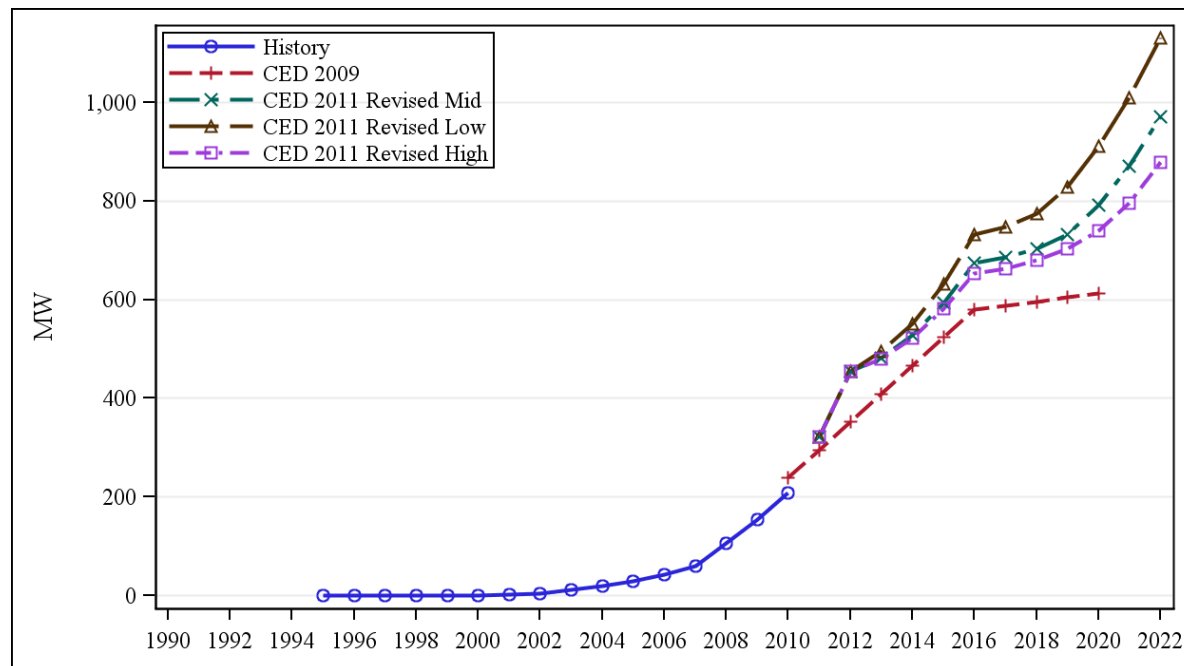
PGE Installed PV Capacity





California Energy Commission

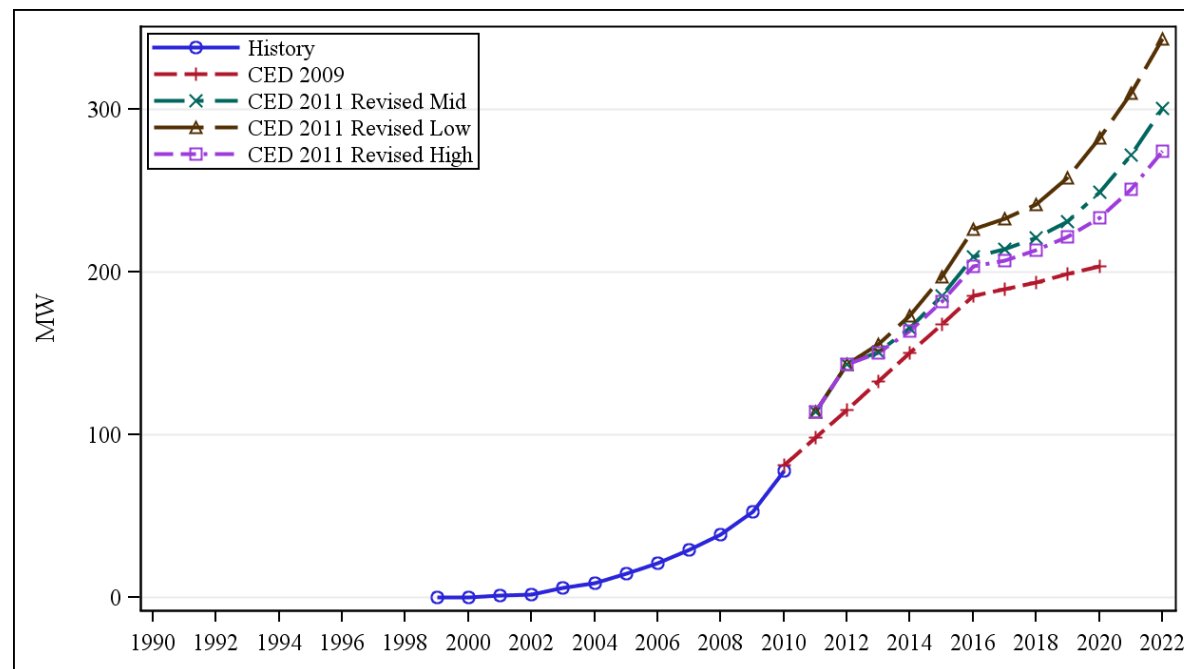
SCE Installed PV Capacity





California Energy Commission

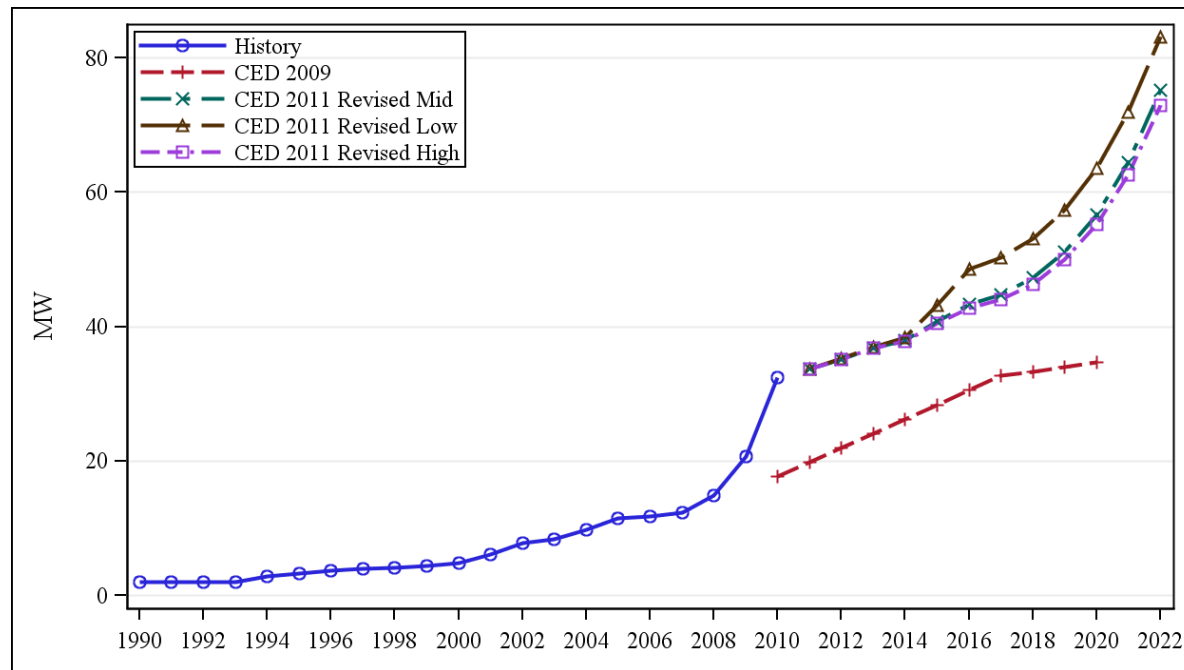
SDGE Installed PV Capacity





California Energy Commission

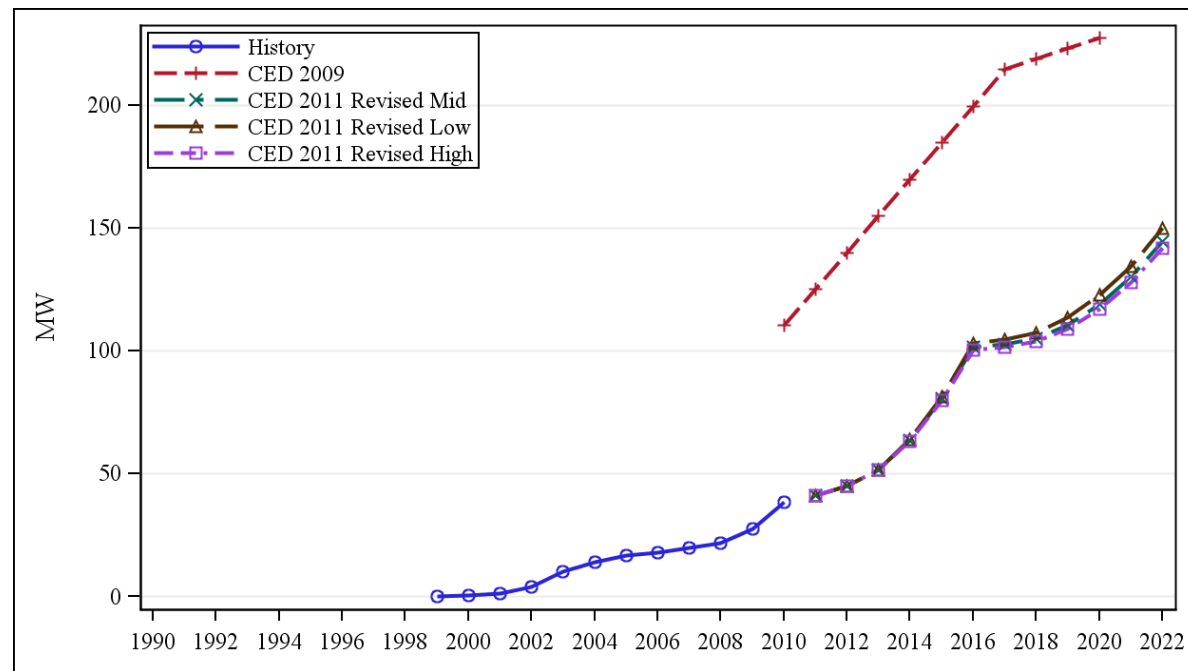
SMUD Installed PV Capacity





California Energy Commission

LADWP Installed PV Capacity





California Energy Commission

- Note – Evaluation Report uses a different dataset than what was used by CEC staff for the revised forecast

2010 CSI Evaluation Report, Table C-1			
Utility	Capacity (MW)		
	Report*	CEC	% Difference
PGE	420	409	-2.6%
SCE	212	208	-1.9%
SDGE	77	78	1.3%

- Total project capacity of projects having the following status :
“Cancelled”, “System
Removed”, “Withdrawn”

Total Cancellations	
Utility	Capacity (MW)
PGE	114
SCE	55
SDGE	16



Next Steps

- Finish work on Non-Residential sector predictive models
- Update QFER database to align CHP capacity per ICF report
- Monitor developments in CHP projects per CHP Settlement
- Monitor participation of CHP projects in revised SGIP program
- Monitor participation of CHP under AB 1613